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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,090	11/14/2006	Werner Diederer	277878US6PCT	4341
22850	7590	06/16/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
LAZORCIC, JASON L				
ART UNIT		PAPER NUMBER		
1791				
NOTIFICATION DATE		DELIVERY MODE		
06/16/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/551,090

Applicant(s)

DIEDEREN ET AL.

Examiner

JASON L. LAZORCIK

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-28 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 15-28 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 27 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date 9/27/2005, 1/23/2006
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Status of the Claims

Applicants preliminary amendment dated September 27, 2005 cancels originally presented claims 1-14 and presents new claims 15-28.

Claims 15-28 are pending for prosecution on the merits.

Claims Construction under 35 U.S.C. §112, Sixth Paragraph

With respect to the guidelines used to determine whether a claim limitation properly invokes 35 U.S.C. 112, sixth paragraph, MPEP 2181, section I, provides, in pertinent part:

"A claim limitation will be presumed to invoke 35 U.S.C. 112, sixth paragraph, if it meets the following 3-prong analysis:

- (A) the claim limitations must use the phrase "means for" or "step for;"
- (B) the "means for" or "step for" must be modified by functional language; and
- (C) the phrase "means for" or "step for" must not be modified by sufficient structure, material, or acts for achieving the specified function."

Claim 23, lines 8-9 recites the limitation "means for moving the bending frame, the final-bending frame, and the upper form relative to one another". Because the instant limitation includes the phrase "means for" followed by a functional limitation, i.e., "moving the bending frame, the final-bending frame, and the upper form relative to one another," and because the phrase "means for" is not considered to be modified by sufficient structure, material, or acts for achieving the specified function, the instant

limitation is deemed to pass the three-prong test for compliance under 35 U.S.C. 112, sixth paragraph.

Although the format of the instant limitation complies with the requirements of 35 U.S.C. §112, sixth paragraph, the written description fails to explicitly link the corresponding structure or structures which actually perform the claimed function (see Specification page 7, lines 11-15), namely "moving the bending frame, the final-bending frame, and the upper form relative to one another", and one of ordinary skill in the art would not necessarily identify the exact structure(s) from the written description.

It follows that since no structure(s) disclosed in the embodiments of the invention are explicitly linked to the claimed function, the specification lacks corresponding structure as required by 35 U.S.C. 112, sixth paragraph and fails to comply with 35 U.S.C. 112, second paragraph as noted in the following section.

Claim 23, lines 10-11 recites the limitation "means for conveying the panes on which the banding operation has been completed to a cooling or quenching station". Because the instant limitation includes the phrase "means for" followed by a functional limitation, i.e., "conveying the panes on which the banding operation has been completed to a cooling or quenching station," and because the phrase "means for" is not considered to be modified by sufficient structure, material, or acts for achieving the specified function, the instant limitation is deemed to pass the three-prong test for compliance under 35 U.S.C. 112, sixth paragraph.

Although the format of the instant limitation complies with the requirements of 35 U.S.C. §112, sixth paragraph, the written description fails to explicitly link the corresponding structure or structures which actually perform the claimed function (see Specification page 8, lines 14-18), namely "conveying the panes on which the banding operation has been completed to a cooling or quenching station", and one of ordinary skill in the art would not necessarily identify the exact structure(s) from the written description.

It follows that since no structure(s) disclosed in the embodiments of the invention are explicitly linked to the claimed function, the specification lacks corresponding structure as required by 35 U.S.C. 112, sixth paragraph and fails to comply with 35 U.S.C. 112, second paragraph as noted in the following section.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 23-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 15 recites the limitation "the bending operation" in line12. There is insufficient antecedent basis for this limitation in the claim. Further, it is not evident if Applicant intends the bending operation to comprise the first press-bending, the second

press bending, both first and second press-bending steps, or some alternate bending operation

4. Claim 15 recites the limitation of "the bending frame" in line 7. The instant term lacks antecedent basis in the claims, and it is not clear if applicant intends to reference the "concave bending frame", "the final-bending frame", or some alternate bending frame. For purposes of examination, all instances of the term "the bending frame" are hereby construed to reference the "concave bending frame" as first recited in claim 15, line 4. Applicant is requested to clarify each instance of the recited "the bending frame" in reply to the instant Office Action.

5. Claim 17 recites the limitation "the cooling or quenching treatment location" in line 3. There is insufficient antecedent basis for this limitation in the claim.

6. As noted in the Claims Analysis section under 35 U.S.C. §112, sixth paragraph, Claim 23 recites the limitation of a "means for moving the bending frame, the final-bending frame, and the upper form relative to one another" in lines 8-9 and the limitation of a "means for conveying the panes on which the banding operation has been completed to a cooling or quenching station" in lines 10-11, and claim 28 recites the limitation of a "means for generating a negative pressure between the shaping surface of the upper form and the surface for the panes extending above" in lines 2-3.

7. Since Applicant has failed to link any of the recited means to specific corresponding structure or structures, the precise metes and bounds of the claimed invention are rendered unclear and indefinite. That is, one of ordinary skill in the art

would not reasonably be apprised of the scope and extent of Applicants invention in view of the claim language and the originally filed Specification.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

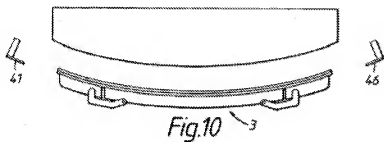
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

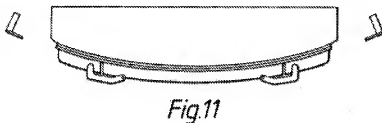
9. Claims 15, 16 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Jacques (EP 0 613 864 A1).

With respect to independent claim 15 and with particular reference to figures 9-17 of the European Patent publication EP 0 613 864 A1 made of record by Applicant September 27, 2005, the Jacques reference teaches:

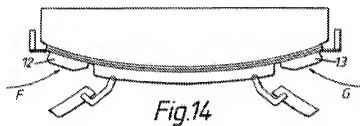
- 1) heating a glass pane to a bending temperature in a furnace (col. 3, lines 25-27),
- 2) bringing the pane between a concave bending frame (3) and a convex upper form (4) (see fig 10),



- 3) pressing the pane between the bending frame (3) and the upper form (4) (see fig 11),



- 4) bringing a frame shaped final bending frame (46, 12, and 13) into contact with marginal regions of the panes (see figs 13-14), and



- 5) subjecting the panes to a cooling treatment (col. 3, lines 37-39).

For claim 16, see fig13 and 14 and col. 4, line 56-col. 5, line 6

Regarding claims 19-20, Jacques notes that the sheet may be removed from contact with the bending frame 3 during pressing (col. 4, line 56-col. 5, line 6), support may be provided by a differential pressure on the upper mold (col. 6, lines 53-55), and that bend panes may be deposited on a conveying device for transporting the pane to a location of cooling (col. 6, lines 45-48).

Regarding claim 21, see col. 7, lines 10-42

Regarding Claim 22, see col. 8, line 45-col. 9, line 22

1.

Regarding Apparatus claims 23-28 and with particular respect to independent claim 23, Jacques reference teaches:

- 6) a furnace (col. 3, lines 25-27),
- 7) a concave bending frame (3)
- 8) a convex upper form (4)
- 9) a frame shaped final bending frame (46, 12, and 13)
- 10) a means for moving the bending frame, the final-bending frame, and the upper form relative to one another (Col. 6, lines 14-33)
- 11) a means for conveying the panes to a cooling or quench station (col. 6, lines 45-48)

Regarding claim 24 see figures 13 and 14 wherein it will appear self-evident that the bending frame (3) has an outer contour that is smaller than the surface circumscribed by the final-bending frame (46, 13, and 14)

Regarding claim 25, again see at least figures 9, 13 wherein it will appear self evident that the bending frame is provided with shaping surfaces that touch the glass pane only at certain points

Claim 26 is not construed to impart any explicit or implicit further structural limitations to the structure as recited in the independent claim 23 and said claim is rejected upon identical grounds.

Regarding Claim 27, see Figure 1, elements 12, 20, and 22

Regarding Claim 28, see figure 3 and col. 7, lines 10-42.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacques (EP 0 613 864 A1) as applied to claim 15 above in view of Balduin (DE 101 05 200 A1; Please note United States publication 2004/0129028 A1 is hereafter employed as an English language equivalent for the cited German reference. All column and line citations are made with respect to the US document.)

(I) Jacques is silent regarding the step wherein the panes are conveyed to the cooling or quench treatment with the aid of the final-bending frame

As noted in the rejection of claims under 35 U.S.C. §102(b), Jacques teaches essentially every element of applicants recited method including, inter alia, heating a glass sheet to a softened state, pressing said sheet between an bending frame and a convex upper form, pressing the outer marginal edges of the sheet with a frame shaped final bending frame, and subjecting the thusly bent glass sheet to a cooling operation. In the preferred embodiment, the glass sheet is transported through the bending system by supporting upon the bending frame (3) (see col. 6, lines 45-48). As such, the Jacques bending frame (3) would reasonably be construed to serve as a quench frame for conveyance to the cooling or quenching treatment location.

Jacques is silent regarding the process step wherein after the second press-bending...the panes are conveyed to the cooling or quenching treatment location with aid of the final-bending frame" as recited in claim 17, lines 2-3.

(II) transport of the panes through the bending system upon the final-bending frame would have been obvious in view of Balduin (DE 101 05 200 A1)

The publication to Balduin relates a method for bending glass sheets comprising a single upper forming member (4) and concentric lower bending frames (5) and (7). The Balduin process differs from the Jacques process discussed above in that the outer concentric bending frame (7) is employed to shuttle the glass sheet through the bending system while Jacques employs the central bending member (3) for this operation.

In view of Jacques, one of ordinary skill in the art would have found it obvious to modify the disclosed glass sheet bending operation to employ the outer final-bending mold as the conveying means to transport the glass panes through the bending system. First, Balduin demonstrates that such an apparatus was known at the time of the invention. Second, one of ordinary skill would appreciate that supporting the peripheral most portion of the glass sheet during conveyance would advantageously minimize the deformation of an unsupported peripheral portion of the heat softened sheet by gravity sagging during the conveyance of the heat softened glass sheet.

It follows that modification of the Jacques process in order to convey the glass sheet through the bending system upon the final bending frame constitutes no more than Application of a known technique as demonstrated Balduin to the known device of Jacques which is ready for improvement to yield a predictable result, namely beneficial support of the peripheral margins of the glass pane during conveyance. Alternately, one of ordinary skill in the art would have found it obvious to try the noted modification

since Balduin would provide one of ordinary skill in the art with a reasonable expectation for the successful fabrication of a bent glass body by such a technique.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON L. LAZORCIK whose telephone number is (571)272-2217. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.